

Q)PDN standards for?--> **Public Digital Networks**

Q)ISDN standards for?--> **Integrated Services Digital Network**

Q)Which organization develops the 802 family of standards for wired and wireless LANs and MANs?--> **IEEE**

Q)Which logical address is used for delivery of data to a remote network?--> **Destination IP Address**

Q)Which message delivery option is used when all devices need to receive the same message simultaneously?--> **Broadcast**

Q)Which Data communication standard was divided into Proprietary and Non-Proprietary?--> **De facto standards**

Q)Which of the following is a data communication system?--> **Medium**

Q)Network reliability is measured by which factor?--> **Catastrophe**

Q)OSI is an-->

Q)Which layer is required to carry a bit stream over a physical medium?--> **Physical Layer**

Q)Which layer converts bit stream to Frames?--> **Data Link Layer**

Q)Which layer enables the user, whether human or software to access the network?-->

Application Layer

Q)A subset of network that includes all the routers but contains no loops is called--> **Spanning Tree**

Q)ISO is an--> **Organization**

Q)How many layers in OSI reference model?--> **7**

Q)The network layer concerns with--> **Packets**

Q)Circuits can be designed to permit data flow in--> **one or both directions**

Q)Which one is not a data flow?--> **multiplexing**

Q)How data is transmitted in simplex?--> **one way**

Q)How data is transmitted in half duplex?--> **one after the other**

Q)What is the disadvantage of multipoint circuit system?--> **only one computer can use the circuit at a time**

Q)Which circuit is expensive?--> **point to point**

Q)Which circuit system is called as dedicated circuit?--> **Point to point**

Q)Which circuit system is called as shared circuit?--> **Multi point**

Q)MAN stands for--> **Metropolitan area network**

Q)WAN stands for--> **Wide area network**

Q)The range of LAN is--> **With in a building or organization**

Q)The range of MAN is--> **It covers a city**

Q)How bits are transmitted in parallel transmission?--> **simultaneous**

Q)LAN stands for--> **Local Area Network**

Q)How data is transmitted in full duplex?--> **simultaneous**

Q)How bits are transmitted in serial transmission?--> **sequential**

Q)Signal to noise ratio is defined as--> **SNR= average signal power/average noise power**

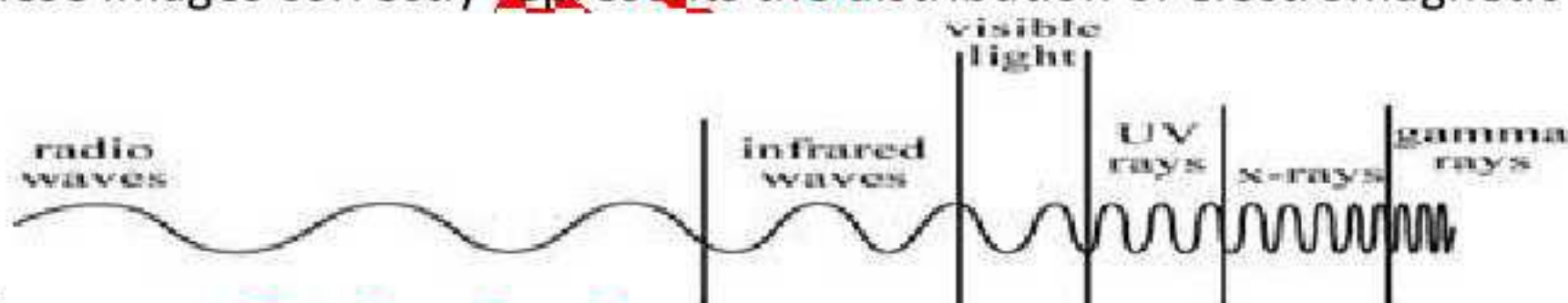
Q)Bit Rate is used to describe--> **Digital Signals**

Q)Bit rate is the number of bits sent in--> **1 second**

Q)How many types of analog modulations?--> **3**

Q)Creating an extra signal is which noise?--> **Thermal noise**

- Q)The effect of one wire on the other is--> **Cross talk**
- Q)The range of WAN is--> **Global**
- Q)Noise is another cause of--> **Impairment**
- Q)M-ary transmission results in reduced channel--> **bandwidth**
- Q)Abbreviation for TCP/IP--> **Transmission control protocol/Internet protocol**
- Q)IP is--> **Connection-less**
- Q)IP uses how many bits--> **32**
- Q)Baud is the unit for symbol rate in--> **Pulses per second**
- Q)M-ary transmission is a type of--> **Digital modulation**
- Q)Which is not a analog modulation system--> **Digital Modulation**
- Q)Which is not a Digital Modulation shift key--> **Digital Shift key**
- Q)_____ are used for short-range communications such as those between a PC and a peripheral device.--> **Infrared waves**
- Q)Transmission medium is included in which layer--> **Physical layer**
- Q)Information transmitted over transmission medium is in which form--> **signals**
- Q)Electromagnetic waves are--> **Transverse waves**
- Q)-----cable consists of an inner copper core and a second conducting outer sheath.--> **Coaxial**
- Q)In an optical fiber, the inner core is _____ the cladding--> **Denser than**
- Q)POP stands for--> **Post office Protocol**
- Q)Transmission media are usually categorized as--> **Guided or Unguided**
- Q)The oscillations of an electromagnetic wave are--> **periodic and repetitive**
- Q)The distance of one cycle occurring in space is called as--> **Wave length**
- Q)Which of these images correctly represents the distribution of electromagnetic waves in a

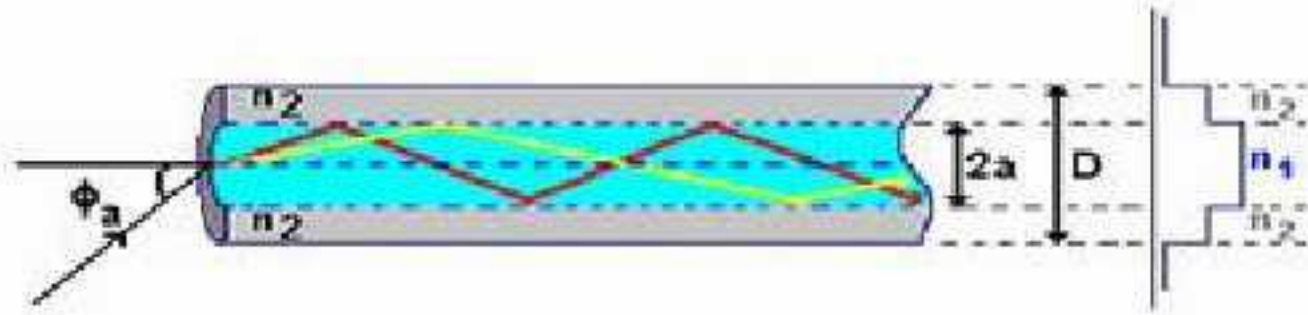


- spectrum?-->
- Q)Which form of electromagnetic rays is used by health professionals to inspect bones and teeth?--> **X-rays**
- Q)Electromagnetic waves that travel along a transmission line from the load to the source is called as--> **Reflected waves**
- Q)Which is not a characteristics of electromagnetic waves--> **bandwidth**
- Q)If the electric field (E) and Magnetic field(H) are perpendicular to each other at all points ,it is referred as--> **Space or quadrature**
- Q)Electromagnetic waves that travel along a transmission line from the source to the load is called as--> **Incident waves**
- Q)Optical fiber can be classified in how many ways--> **3**
- Q)Which is not a classification of fiber optic--> **Double mode**
- Q)Which of the following index controls the speed of the light--> **Refractive**
- Q)What is the best way to avoid modal dispersion--> **Single mode**
- Q)Which of the following primarily uses guided media?--> **local telephone system**
- Q)Signals with a frequency below 2 MHz use _____ propagation.--> **Ground**

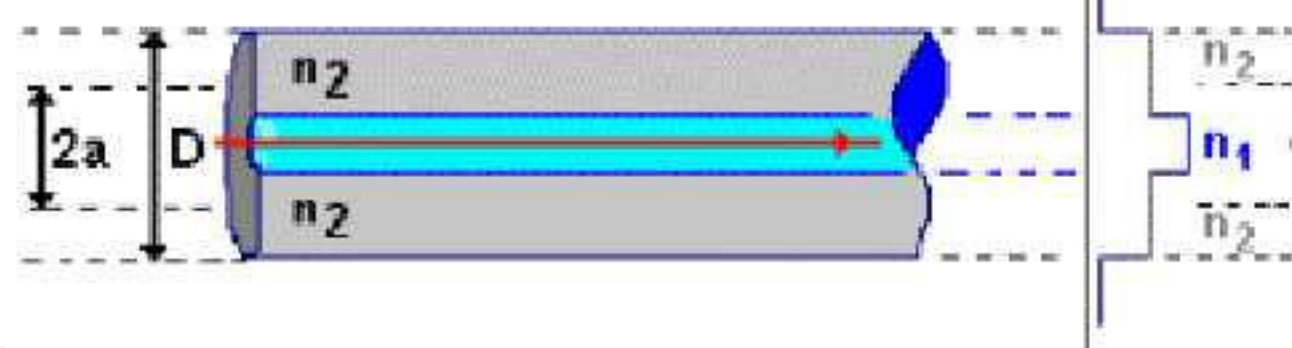
Q)Which type of electromagnetic wave has the greatest frequency?--> **Gamma rays**

Q)In fiber optics, the signal is _____ waves--> **Light**

Q)The above picture is which type of fiber

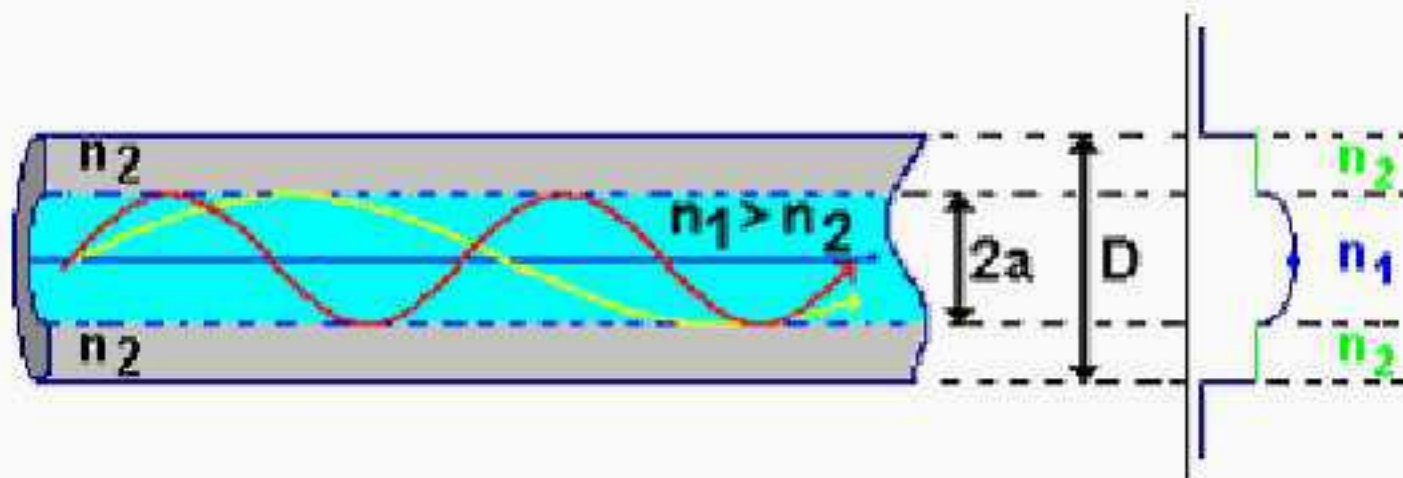


--> **multi mode fiber**



Q)The below picture is which type of fiber
single mode fiber

Q)The below picture is which type of fiber



--> **graded index fiber**

Q)What does LASER stand for?--> **Light Amplification by Stimulated Emission of Radiation**

Q)The refractive index of medium is--> **Speed of light in free space/speed of the light in medium**

Q)In space light propagates with velocity--> **$c = 3 \times 10^8 \text{ m/s}$**

Q)Which of the following comes under photonics--> **Silica cavity**

Q)In Light propagation, visible light extends from--> **380nm(violet) to 780nm(red)**

Q)Which is not a type of the intramodal dispersion--> **Waveguide dispersion**

Q)Which is also called as chromatic dispersion--> **Material dispersion**

Q)Heating of ion impurities results in dimming of light at the end of the fiber--> **Absorption**

Q)Which is defined as the ratio of optical output power to the input power in the fiber length of L--> **Attenuation**

Q)The loss which exists when an optical fiber undergoes bending is called as--> **Bending losses**

Q)The bending in which complete fiber undergoes bends which causes certain modes not to be reflected and therefore causes loss to the cladding--> **Macroscopic bending**

Q)Either the core or cladding undergoes slight bends at its surface. It causes light to be reflected at angles when there is no further reflection--> **Microscopic bending**

Q)What type of laser could cause skin cancer if not used properly?--> **Eximer laser**

Q)What is the type of laser used most widely in industrial materials processing applications?--> **Carbon Dioxide Laser**

- Q)Which is not a "common" value of resistance--> **4k4**
- Q)Which is not a type of Linear scattering--> **Stimulated Raman scattering losses**
- Q)Which of the following is Non linear scattering--> **Stimulated Brillouin scattering losses**
- Q)OTDR stands for--> **Optical Time domain Reflectometer**
- Q)Connecting a lead from the negative to the positive of a battery will produce--> **A short circuit**
- Q)Two binary values are represented by two different frequencies in :--> **Frequency-shift-keying**
- Q)Codec uses--> **PCM and Delta Modulation**
- Q)A figure-of-eight laser is--> **a mode-locked fiber laser containing a nonlinear loop mirror**
- Q)Which scientist first came up with the idea of stimulated emission?--> **Arthur Schallow**
- Q)A Gaussian laser beam is--> **a beam with Gaussian intensity profile and plane wave fronts in the focus**
- Q)How many absorption/emission cycles does a Nd^{3+} ion on the beam axis of a Nd:YAG laser do per second?--> **roughly 20 000**
- Q)Does a saturable absorber as used for passive Q switching of a laser necessarily lead to substantially reduced power efficiency?--> **No, it doesn't. If its saturation energy is very low, not much energy is required to saturate the absorber.**
- Q)The sampled waveform has fixed amplitude and width whereas the position of each pulse is varied as per instantaneous value of the analog signal is known as--> **Pulse position modulation**
- Q)Which step is not consisted in Pulse Code Modulation to digitize an analog signal--> **Demodulation**
- Q)The amplitude is maintained constant but the width of each pulse is varied in accordance with instantaneous value of the analog signal is known as--> **Pulse Width modulation**
- Q)A system of modulation in which pulses are altered and controlled in order to represent the message to be communicated is known as--> **Pulse Modulation**
- Q)Which is not a part of the Analog pulse modulation--> **Pulse frequency**
- Q)Which is not a method of sampling--> **Flat down sampling**
- Q)Amplitude of pulses is varied in accordance with instantaneous value of modulating signal is known as--> **Pulse Amplitude Modulation**
- Q)Which is the method of analog companding--> **A-law**
- Q)To calculate the percentage error introduced by digital compression is %error=--> **12-bit encoded voltage - 12-bit decoded voltage X 100**
- Q)What is the Minimum Nyquist sampling rate is--> **$f_s \geq 2f_a$**
- Q)The process of generating pulses of zero width and of amplitude equal to the instantaneous amplitude of the analog signal is referred as--> **Sampling**
- Q)The process of dividing the maximum value of the analog signal into a fixed no. of levels in order to convert the PAM into a Binary Code is called as--> **Quantization**
- Q)LPCM stands for--> **Linear Pulse code modulation**
- Q)The step size increases with the amplitude of the input signal is called as--> **Non linear pulse code modulation**
- Q)In TDM, the transmission rate of the multiplexed path is usually _____ the sum of the transmission rates of the signal sources.--> **Greater than**
- Q)___ is a digital process that allows several connections to share the high bandwidth of a link--> **TDM**

Q)In synchronous TDM, for signal sources of the same data rate, each frame contains _____ slots--> **n**

Q)Line speed is the data rate at which serial PCM bits are clocked out of the PCM encoder onto the transmission line is--> **Line speed= samples/second X bits/sample**

Q)Which uses a single-bit PCM code to achieve digital transmission of analog signals?--> **Delta modulation**

Q)What is a procedure of converting an analog into a digital signal in which an analog signal is sampled and then the difference between the actual sample value and its predicted value (predicted value is based on previous sample or samples) is quantized and then encoded forming a digital value.--> **DPCM**

Q)Which multiplexing technique transmits digital signals?--> **TDM**

Q)The difference between the Wavelength-Division Multiplexing (WDM) and Frequency-Division Multiplexing (FDM) is that the frequencies are--> **A. very high**

Q)FDM is an analog multiplexing technique that combines--> **Analog signals**

Q)Which is not a type of line coding--> **tripolar**

Q)We can divide _____ into two different schemes: synchronous or statistical.--> **TDM**

Q)Which is a communications system that uses digital pulse rather than analog signals to encode information.--> **digital carrier system**

Q)The system has to be line encoded and placed on special conditioned cables called T1 line will become as--> **T1 carriers**

Q)Two common scrambling techniques are--> **B8ZS and HDB3**

Q)OSC stands for--> **Optical Supervisory Channel**

Q)ROADM stands for--> **Reconfigurable optical advanced multiplexing**

Q)DWDM stand for--> **Dense wavelength division multiplexing**

Q)WDM is an analog multiplexing technique to combine--> **optical signals**

Q)Wavelength division multiplexing is same as--> **FDM**

Q)WDM systems are divided into how many wavelength patterns--> **2**

Q)CWDM stands for--> **coarse wavelength division multiplexing**

Q)The path layer of SONET is responsible for the movement of a signal--> **Across a physical line**

Q)In SONET , each synchronous transfer signal STS-n is composed of--> **8000 frames**

Q)In SONET ,STS-1 level of electrical signaling has the rate of--> **51.84 Mbps**

Q)The loss of signal strength is called:--> **Attenuation**

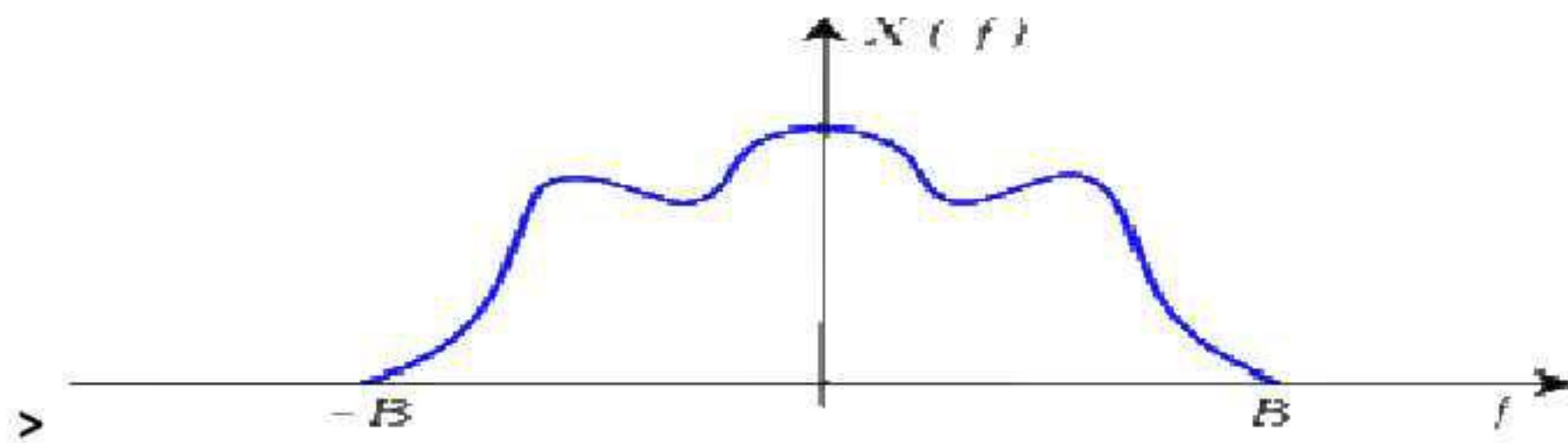
Q)What is the baud rate of a digital signal that employs Differential Manchester encoding and has a data rate of 1000bps?--> **2000 baud**

Q)Which category of UTP cable is the most current and commonly implemented?--> **Category 5e**

Q)SONET stands for--> **Synchronous optical network**

Q)The _____ technique expands the bandwidth of a signal by replacing each data bit with bits.--> **DSSS**

Q)Which is not a sampling technique--



Q)The _____ technique uses M different carrier frequencies that are modulated by the source signal. At one moment, the signal modulates one carrier frequency; at the next moment, the signal modulates another carrier frequency.--> **FHSS**

Q)A unidirectional path switching ring is a network with--> **Two rings**

Q)Automatic protection switching in linear network is defined at the--> **Line layer**

Q)SDH stands for--> **Synchronous digital Hierarchy**

Q)_ is designed to be used in wireless applications in which stations must be able to share the medium without interception by an eavesdropper and without being subject to jamming from a malicious intruder--> **Spread spectrum**